

Promoter 01

-1161 CACAAACATA CACTCAAAAT CCAGACTCAC ATCTACTCAA TTATGCAACT  
 -1111 TCATCATGAA AACATCAAAA ACAGTCAAAG TAACAAAATC AAGTCAGATT  
 -1061 CAGCACACAA AGCCAGTAAA GATAGAAAAT TTAACGAACG CTCATGCTAA  
 -1011 GCTGCGCAAA ATACTTCCTA ATCAAAACAG TAACAACGAG TAATTAGCAA  
 - 961 AATCCGAGCA GAAAACTCTC ACCCACCTCC GAAATTCACG TCTTCACTAA  
 - 911 AATTTTCGAA AGGAATCGAT CAATACCAAC CCATTACACA AAATACATAA  
 - 861 TCAAAATGGC GAGAATCGTA CCTGGAAACT TTGCTTCAAG TCGCAGAGAG  
 - 811 AGGAAAAGGA AGATCGTGGA GAAAGGGGTT TAGGGTTTAA GCTCAGACTT  
 - 761 CTATTGGAGT AAATGGGACG GTGTCACATT TTCCGTTTTG GAAATGAACT  
 - 711 TTGGGCTCAC GTTATGGGCT ATTAGATATT TGATGGGCTT TCTAGTAAAT  
 - 661 ACAATATAAG TTATTGGGCT TAGTTTAAAT AAGCCCATGT TGGAAATATT  
 - 611 TGACACATGT CTTGGCTACT AGTGCTAAAC ATGCAACCGA ACAGTTGTCTG  
 - 561 AGACAAGTCG CAGCATATAC AATGGATCAA ACACGCCTAG TGTCGCCGCG  
 - 511 TCTCGCTCAT GTGTCACCTT GTTTCCTCGT TTTTTTTTAA TTTTTCATAA  
 - 461 GTTCTTTTGT TTTATCTTCA ATACAAATTT TTGGCTGTAT CTTGCAAACCT  
 - 411 CTTCGATCAT ATCGCCAATA TACGTGAACA CTGGTGATCT AATTTGTTGT  
 - 361 GTTAATTGTT AAATTTAGAT TCTATTCTCC GGTTTAAAAG TGAATTATAT  
 - 311 GTATCATGGT TAAAACATTG TAAGTAAGAT GATAATAAAA TGATAAATTT  
 - 261 AGTTGATGGA TAACGTGAAG CAAAAAATGA GATAGATACA TTTGATTTTG  
 - 211 TCGTATTTTG ACATATGCGG AGAGTGAGCT ACGCGCATGA AGATCAAGAG  
 - 161 ACACTTGCTC GAGCTCACAG AGTGACGTGT AAAAAGCTTA GACTGAAGTC  
 - 111 CCCATGCAAA CCTAATCCTA CGTGGCTCAA ACCACGAGCT CACTTGACAA  
 - 61 TATATAAACT CCTCCTAAGT CCCGTTCTCT TCATCCATCT CTCACAACAA  
 - 11 ACAAAAAG -4  
  
 - 3 AAAATG

Figure 1

Promoter 03

-1148 CAAGAGTGTA AAACGTACCG ATCAAATGTC TTTATAAAAA AAACGTGTTG  
-1098 ATGTTGTTCT GTGAATACAA TTAGTTCTGG TTAACAGCTG GTCGACCATT  
-1048 TTCTGATGAG AATTTATGTA AGGCCATTGC TCTGGTGTG AGAAGGTTTA  
- 998 GTTTGGTTCA AGCTAACCGT GGTTAGAAAG TTAGAATATA ATGTGTTTCT  
- 948 TGATCAGTGA TATCGATCGG ATTTGTATTA TTCATATTGT TTAATCTTTG  
- 898 AGTAATTCAT AGTGGTAACT CTTTTTTTTT TTTTTTTTTT TTCATATTGG  
- 848 TAACTCTTTG AAATGAAAAA CATAGCTAAG AATTGCTAGC TTTGATTTAG  
- 798 TCGAGACGTA CGAACTCTCG ATTTTGGTTT TTGATTTGTT GGTGTAAAC  
- 748 TCTCGATATT CATAACTCGT AAGATTTTGT ACGTATCATC TTCTTATTCT  
- 698 CTTTCATCGCT CTGTTTTCAA TTTTATGTCA AAACATGGTT TTGGTAATTT  
- 648 CTTTTACTCC TACTTCACGG TTTGAGTTAT AATTTTTTTG GTAAACCCTT  
- 598 AACCACGAGT TTTGATGTAT TTTGACACCT CTAATTATGT GTGTATACGT  
- 548 ACACATATAA TTCGGTATTT TCTTAACATA TATATCCCTC ATAAAAATTT  
- 498 CTTACATGCA TTGTTTCGTGA GTGACCCGTT AATATATATA TTGATAGATA  
- 448 CTCTTATAAA ATTATATTCT AAATTTTCTAGA TTAAGCTGGC ACAACTATAT  
- 398 TTCCAACATC ACTAGCTACC ATCAAAGAT TGACTTCTCA TCTTACTCGA  
- 348 TTGAAACCAA ATTAACATAG GGTTTTTATT TAAATAAAAG TTTAACCTTC  
- 298 TTTTAAAAA ATTGTTTATA GTGTCATGTC AGAACAAGAG CTACAAATCA  
- 248 CACATAGCAT GCATAAGCGG AGCTATGATG AGTGGTATTG TTTTGTTTCGT  
- 198 CACTTGTCAC TCTTTTCCAA CACATAATCC CGACAACAAC GTAAGAGCAT  
- 148 CTCTCTCTCT CCACACACAC TCATGCATGC ATGCATTCTT ACACGTGATT  
- 98 GCCATGCAAA TCTCCTTTCT CACCTATAAA TACAAACCAA CCCTTCACTA  
- 48 CACTCTTCAC TCAAACCAAA ACAAGAAAAC ATACACAAAT AGCAAAAC -1

1 ATGGCTA

Figure 2

Promoter 04

-1037 CAAACCAT TG TTTACACGTC AATTTGAATT GCGTCAAATA TTCGACTGGA  
 - 987 ATCCTACAAC ATATTTCTTC TATTATATCA ATAGGAAGCA ACGAACGTTC  
 - 937 ACATGAAGCC ATGCAAAAAC AAATTGAGAA AAAAAATCAG AAAATTTATG  
 - 887 ACAAGTGGTC TTGCTTCTTA TACTACGTCG TGAATGGATG GTAATAAACA  
 - 837 ATTAAATGTT ACCTCTAGTT TTTTTTTTTT GAGAGAATGG TTTTATCCG  
 - 787 TATATGGCTT ATTACAAGTT TCCTCCTTTT TCGAGTTTGG TTTGAGGTCT  
 - 737 ATATTGAAGA TGAGATACTA AAAATTGAGG TAAATTCTTT AGTGTGAAGG  
 - 687 AAAATTAGTA AATACGATAC GTTTGGAATT GTTTACTACT AAAAAAAAAA  
 - 637 TTGTTTTAGA CCAAGCCAGT CCGACAAAAA GCGGTGTGAA TCATAAGAAG  
 - 587 TATCACATGA TGCTAGACAT AAAAGATTTT TCAAACATGA CAAAACAAAT  
 - 537 TGTGAGTGTC TTAGTCATGC CATTTGAAGT AGAACGAAAC TTAGTGATGA  
 - 487 GACACGTAAAC ATCAGTGAGA ATCAAGATCT AACTTCGGAC TTATCGTACG  
 - 437 TACCACGTCC ACCTAAGTGT TATCCATATC TACTACATGT CTATCTTCAT  
 - 387 TCAATTTTTT TTTTGCATTA ACTTGTAAC ATAGTGCATA ATAATTAGAA  
 - 337 TCAAGATTTG AATCCAATTC GCTTACTAAA TCCTAAATGT TAAAAGCATA  
 - 287 CATGTTTTTC AAATCCTACT TTTAGGTGCT AAGTTTTTTT TCTAAGGTAG  
 - 237 TTAGAGATTG TTAGATTTTA TATCATTGAA CTGATCATCA GTCTCTATAC  
 - 187 TAACTTCTAG ATCTCATTGA ATGTTTACTC AATTTTTTTT AATTTTTTGT  
 - 137 TTGGATAATC GTCTGCTCGT GGTTTTGATG CGTACGAACA CTCGTCACCA  
 - 87 TGCATGTCAA GCTCTCCTTC CTATATAAAC TAAAACCACC CATTATTGTC  
 - 37 CTCAAAAACA AACACATCAA CAAAACAACA AG -6  
  
 - 5 AAAAAATG

Figure 3

Promoter 06

-1413 CTAAACGAGT AAAGTTTAGC ACGATTGAGA CCACACTGAC CCATAGCAGT  
 -1363 CCAATGAGCT ACGGAAGGCC TAGGGCTTGA GGCTTGATGA GCGCGTGGTG  
 -1313 GAATAGCGTT TGAATCTAAA GTTCGGTTTG GTACGACTTG TAATATGAAA  
 -1263 TAATAATGTA CAAAGAAGTT CTACGCTTAA GGGAAGTGT TTGTTTTGAG  
 -1213 CTTTGTATTA GGACGTCTAG TGTACAACAA CGAACGTCGT GTATAAGCGA  
 -1163 TCGTTGACTC TGCACATGTA ACTCTTTCCT GAATAAAAAA TCTTTAAGTC  
 -1113 TTTAATTTCT ACATCTTTTA GGATTATATA AACGTTACTA TATAAATAAA  
 -1063 AAAGAAAAAA AAATCAGTTC ACTAACATGC GAGACTTTGG GCTAAATATA  
 -1013 GTGATTCCAA AGAAAATGAG TTATAATATT AATTAATATA AAGCTCATTT  
 - 963 TCTTTGGAAT ATCGTTATAA GAATATTTTA ACTTGGATAT AACTGGGCTT  
 - 913 ACGCCATTTG CATCTCGAGG ATTTTTTGTT TTTGTTTTTG TTTTTTTAAT  
 - 863 ACATTCTCGC ACTTACACAC TAAAAATCAT AATGATCTTC TTAATTCTTT  
 - 813 AGCGGAACCA CCAATTAATC TTTTTATTAA GAACTTTATT ACTTATTTCA  
 - 763 CTTATTTGTG CATACGTGCA TTATTTTGGC AGTAACAAAT ATCGCGTTAT  
 - 713 ATATACTGAA ATCCGGACGC ATTAATAATA GGGATATGAT TATATGAACC  
 - 663 ACTATCTAGC TTTGGTAGAA ACCCAATTAT AATCAAATAA TTTACCATTA  
 - 613 TTGAATAAAT TAGGCTATAT AAGTTCATTA ATAGATGCTA TAGGTTTTTC  
 - 563 TTACAAGGCA CACATTTGAT TGTATTTTTC TTTCATATAC ACTGAATGTA  
 - 513 CATGTGTACA CTTGGCATACT ATGGCAAGAT TATGTGTTAC AATATAGACT  
 - 463 GTGCCATTGC CATGCAATGT GACTCCTGTG GCCATTTCTA TCACAATGTG  
 - 413 TCAATCTTGG AGTATCCGTT GTTTATCCTC TAATTTACTG ATTAATTTAT  
 - 363 GAACATGTAT AATTATTTAT ATCATATGAT CTCGTAAGAT ATCTTAGCAT  
 - 313 TTTCCACCAT ATGTTATTAG TAAATCATCT AGATGGATTG ATGTAAATAG  
 - 263 GAAAGTTAAA TTAACACACC AAAAAAGTAA CTGATTAAAA GCATACAACT  
 - 213 TAATATTCAG ATTATGGTAA CTAAATCAGT CTCATGCAAA CTCCAAAAAA  
 - 163 TTATACGAGT CACAACCTCT GATTTTTTTC CGGTAAACA AAATACATAT  
 - 113 TTTCATTTGT ATGCAACCAG AATAAAACAC TAACTATCTC CTTTAAATAC  
 - 63 CATTTTCCCT ACGAGTCTAC GACGCTCTCT AAACCTCTTA TACAAAACAA  
 - 13 AACACACCC -5  
  
 - 4 AAATATG

Figure 4

Promoter 07

-1118 GATCCGAAAA GTAGAGTTTC GTGGATCTGA TAATTGGAGA AGAGAGAACG  
 -1068 AGCTGAAACC CTAAATTCGG ATAAAGTCTG CAACTTCTGT TGTTTCGGTG  
 -1018 GCGAGAACAA AAATAATGAG AGGAAGAGGA AAATATCGTC GTTTTTGTCT  
 - 968 CACAGTCTCT TTAGCAGCTT TTCTTTAGAT ATTTATTTTA TTTTTTCCAT  
 - 918 GGATAGAGAG AGCTAGGCAT TCCGGTTATT TGGAGATTTT GGAATTTCAA  
 - 868 TTTTGCGGTT TGGTATTTTA TTTTATTTTA TCAATTTGAA CGAAACAGAG  
 - 818 CTTTGTTTTG GTTACGATGC GGTGGATTTT GGTTTCGGTT AGAGTGATAT  
 - 768 ATATTTGGTA CCAAATTAAA CCAAGATTCG TTTTCGGTAA AAACAAAATT  
 - 718 TGATTTTTAA GCATTTTTTG AAAAATTAGT GTTATATATA TGAGATTTCT  
 - 668 TAATCAAAAT CTCACTTTTA TCCGATTTAG TGGTAGTTCA TAAAGTGGTT  
 - 618 TCATGTATAT GATACCTGAA TAACCAACAT ATGTATTTTA AGAGACACTT  
 - 568 GGAATAATAA TTCTAAATAT CCTAACTACT CGTGTCCGTA TGTTTTGTCA  
 - 518 CGGTGAAACG TGAGAGGACT AGTTTTTGTC ACCCGTCCAT AACATTCTTA  
 - 468 GACATACATT ACTTTGGGAG TGAAAAACAT TAAGCTTATC TTTATCCATA  
 - 418 TATTGTCTTA CCATCAATAG ACAATATCCA ATGGACCGGT GACCTGCGTG  
 - 368 TATAAGTAAT TTTTCAAGAT GCTAAACTT TTATGTATTT CAGAATTAAC  
 - 318 CTCCAAAAAC ATTTATTGAC ACACTACTAC TCTTTCCGTA TTGACTCTCA  
 - 268 ACTAGTCATT TCAAAATAAT TGACATGTCA GAACATGAGT TACACATGGT  
 - 218 TGCATATTGC AAGTAGACGC GGAAACTTGT CACTTCCTTT ACATTTGAGT  
 - 168 TTCCAACACC TAATCACGAC AACAAATCATA TAGCTCTCGC ATACAAACAA  
 - 118 ACATATGCAT GTATTCTTAC ACGTGAAGTC CATGCAAGTC TCTTTTCTCA  
 - 68 CCTATAAATA CCAACCACAC CTTCAACCACA TTCTTCACTC GAACCAAAAC  
 - 18 ATACACACAT AG -7  
  
 - 6 CAAAAAATG

Figure 5

Promoter 09

- 975 TCAGAAAGAG AAGTGAGCTA CCTGCAGTGT CCTCTGTTTT GTCGATGAAG  
 - 925 GATTTTTTAGA TTGGTATGTG ATGAAGTACA ACGAGCTGAT GCCTGCGTTG  
 - 875 ATGGCTATCT TCACCAAAG TCGTGTTTGT TATGAAGCAC AACGAGCTGG  
 - 825 TGCCTACGTT GATGGCTATA TTCACCAAAG GTCGTGTTTC ATAGATCAGA  
 - 775 AGGCACACCT ACAACAATGA GCAGTGCCAA GGTTTGTTCT TATTTTGTTG  
 - 725 TTGTCAGTTT TAGATTTCTA GATGAATCTT ATGATGTGAT AATGGAAAAA  
 - 675 CGAAAGAAAA GCTTTTGTTA AAGTATCTAT GAGTGATATC ATGATATGTC  
 - 625 AAAAATGTTG CATGGATACA TTGATTCTTT AGTACTTGTT ACGAGCTGCT  
 - 575 AAGAGAGTCG TGTCAAGTTC AATACTTTTC CTTGTCATTT AACATAATTG  
 - 525 CTTGTCTGTT TGGATTCTAT TGTGCGGAAG TTATGATTTA TATTTTCAGA  
 - 475 TTCATATTTT CAATTAGGAA GCTTTAGTTG GAATCAAAGT GGATGACCCT  
 - 425 GATTGAGGAT TTTAATGATC GTTGTGAGAA CCTTTCTTGT AGTTAGTTGG  
 - 375 TGGATTGTAA AAAAATTATA TGTATTTAAC TCTTGATTGA GAGTCAGAAG  
 - 325 TTGGAAAAAT GAATTAAGAG GTTTTCGAAT AAGAGATCAC AGTTATAGTA  
 - 275 TAGTATTAAT TGGATATCAC AATCTATTCA TAATATTAGC TAGTTAGATA  
 - 225 AAATTGTGTT TGATCTTGGC AAGAGGTGTT AAAATAGTAT CATGTTGACA  
 - 175 TGTGTTGTTG ACTATTAGTC GTAATTTAAG CTTATGTATA TTTCTTGTA  
 - 125 GAAATGTTCA TGTATCATAA TAAATACAAG TGTATCGAGT TTTTGTATAT  
 - 75 ATAGAGGTCT ATGATTTGGG AAGAAGAACA CAACATAACT CACCACAAAC  
 - 25 ACAATCTAAT CCAAAAAATC AAAAG -1

1 ATGAAT

Figure 6

Promoter 13

-1121 TGACACGCAA CAACCAAAGC CAAAAGGGTG CGTTACCATT AATTCAGGGA  
 -1071 AAGCGAAATA AACCCAAATC TCTCTTCTAA CGAAGTAACA ACTCACCCAC  
 -1021 TTCTCACATT GATTCACTCC TTTCCAGTTT TTACATATAG CCTTCGTTCA  
 - 971 TCAATCACCT TAAGCAAATT GCAATCACAA AAAAAAAAAA GTACAGTACT  
 - 921 TAGCAAAATT TTAAGTTTTT GTTATTTCCA CGGCAACTTA GCAAATATGC  
 - 871 ACCACATATT GACATTAGCT AATATACAAC ACATGTTTTT TTAGAAATGT  
 - 821 ACAAGCATTA ACAAATATCC AACACAAAAT GACATGATCG TAGATGATTA  
 - 771 AGATAATTCG ATCCCTATAA CTAATAGTTT CCAAACTTC TGCTGACTTT  
 - 721 TCTCTCGACA GCGATGGTAA GAAGAAGGTA CAAAGTTTTG AAGCCCGAAT  
 - 671 ATAACAAAAG GACAGAAAGC TTTTAGTTTT CTAGATAAGA TCTTAGCTTT  
 - 621 GGTCACGTAA AAAAAATTAA AAGTGAATTG GTTAACAATA TAGGAGTACT  
 - 571 TTGTATCCAA AGGTCATTGC AATAAATAAA CACTTAAGTA CTCTGTAGTC  
 - 521 ACACATCTCT AGGAGCTTAA TATTGGATAA TCGCTTGTAG ACTTGTATTA  
 - 471 AAATATTTAG TAGGTCAAAT CCCTATCTTC TACAGTTTCT ACTCTCGTCC  
 - 421 GTACAGACTA CAGACACTAT GCTATAGTTT TGTGTTGAAT TCTACAAAGT  
 - 371 ACAAATTCTT CTTTCGGTGC CAATAACAAA TAAACACAAT TCTCAAATTA  
 - 321 CATTTGTCTA AATTTTTTATT TGATTCGGTA TAAATGTAAC GCTATGTTGG  
 - 271 GAATCATATG ATAAATCCAG ATTAAGACTT CTTATTTAAT TTATTTTTGT  
 - 221 ATATATAAAA TATAATATCC AACCATAAAG TTTTTTTACC GATCGATGAT  
 - 171 AATGTGAATC CAAATATTTT AACAGGATGA TAAATAATTG ATGTGGCTTT  
 - 121 TATAACCGCA GCAATTCTGG CGTGACTCTC TCCGCAGCAT TTATTTTTCT  
 - 71 CTCTATAAAT TAAAAACATT ACTTACTCTT TCTCTCTTCC ACTTAACTCA  
 - 21 TATCAACCTT CGCCGGA -5  
  
 - 4 AATAATG

Figure 7

Promoter 14

-1056 ATCTCTGCAA ATCAAACCTT ATTATTAAGC TACATTTACA TAGTGTCCTT  
-1006 ATAATTCTCA TGACATAGCA ACATTATTAA ACGACAACTT TCTAGCTTCA  
- 956 TTTAAAATGG AAAATCACAT AACACTCACA TTAACATATAC TAACATAACA  
- 906 CTCACATTAC CGACTAGCAT ATAAATGGAT ATTGATATAA CAATAATCCC  
- 856 CCAAATTTAT GTCTATTTTG TTCATTATGC AAATGTCCCA AAATGATATA  
- 806 TCTTGGAAG TACTAACCGG AGACGAGGGT CGAGGTATAG AAGTGATTTG  
- 756 GTCGAACCGA AATGAGGAAC CCGGGTTTGG ACACCAGGAG CATTTTGGTA  
- 706 ATCATCCAAA TCAGGGTCAT AGTACAACAT CATTCGATCG CTGAAGCACC  
- 656 TGGTGAAGGG AGACAATAAC ACTGCTGCAT CGAACCATAG CCTAAACCAT  
- 606 CCACCACTCT TCTTATGAAT CGGATATAAC CAGCTGCTAC ACCAGACACT  
- 556 ACTTGGCTTG TATTCTCTGT CCAGCCGTAC CTCTAGCTGG TTACCTCCGT  
- 506 TTCCTGGAAC CAGAATCAAA GGTACACGT TGCTACCCAC AGCTTGACAC  
- 456 ATCGAGGTCA TCGTCACCAC AACGAGTATC GCTATGACTA CCGAATAATG  
- 406 TGAAGATATT TTTTTCATTT TCGTTCTAAG AAACAGACTC TCATGGTCAT  
- 356 GGATCTATGC AGAAAGCTGG AGATTTGAAG AAAAAGGTCC ATTGAATTTG  
- 306 AAAACAGAG TAGTATCTTA AAACGTAAGG CTTAAGATAA GTAGTATATG  
- 256 GTGGATATGG AACCCGCGTA ATCATCTAGA GGCTCTACAA ATATTTATTT  
- 206 TGTATTTCCCT TCTTATTTTG TATTTGCCTA CGTGGCATT AACAACGTAT  
- 156 TTAAC TTGAA ACCAGATTTA TGGCCCAATG GGTCGGGTCG ACCCGACCGA  
- 106 TTTTAACTG CGCTCCTAAC TAAAAAAAAG TCAAAACCCT TTGAAAAACC  
- 56 TAAAAACGCA ATTTGCTTCG TCGTCTCTCA TCTCTTTCTC TTTCTCCG -9  
  
- 8 TCGCCACCATG

Figure 8



Promoter 15-2

-1074 GTAAGTCGTT CTCTAATCTT CCATGCCAAT TTGCTCGGTT AAAACCAGAC  
 -1024 TGGTTGGACT GAAAAATCGG TTTTAATTAA TTGAGTTGTG CTTATGAGGT  
 - 974 CTATTGGTTT ATTTTAAAA TCCTTTGTAG ATTAGGAGAG TACCAACAAG  
 - 924 AGCGAAAGAC ATCACTAAAC ACGAAGAGTG AAAGTGGAAA AAGAGAATA  
 - 874 TCAAGACTTG ACTCGAAGAC CGGATTGTAC CCGGATGATT CGAAACAGGG  
 - 824 CGGTGCTGGT GCTGGTGCTG GTGGTTGGCT TTCTTGTTGT CTCTGTTTTT  
 - 774 CGGTGAAAAA TTGAGGTTAT TACTCTTGT CATGTCAATT ATTTAGGTCA  
 - 724 TAGCTGTCCA AGAGACGCGA GACATTAGAC AAGGTAATTA CCGATTGTAT  
 - 674 CCTATATATT CCTATGTAAC GAAATTCAGA TACTACGTAA TCTTAATGTG  
 - 624 TCGATGGAAT GAAAAAATAA AGTATTCTGT AAATATTTTC TATATATTAT  
 - 574 TTAGCATATA TACGCTTTAT AAATTATAAA TTTGGTCCCT CCCAAATACA  
 - 524 TGAAAACAAT GTAGTGATAA AAAAAAACA AATTCTGTAT ATATGCTATT  
 - 474 TTTATAACAT AACCAAGCATT TTTCTTAGTC GGTAAAATT TCAAGTGTTT  
 - 424 AATACTTTTA TATAATTATG AACGTAAGTT ATAATCTATG TTTTTTTTGG  
 - 374 TCAGTCCATT ATTGATTATT CCATTCACAC TATATGCAAC CTATATTCTT  
 - 324 CCTATGAAAC TTTTGATCGT GTGTTAAATA ATAATACAAA TTTGATTTCA  
 - 274 TCTAATAGGT GGGTGGGGAC TCTCTAATTA CGTTCTTTGA CATCTACTCA  
 - 224 TCAACATTTG GCTAATCTTT CTAAAGGAAT TCCATCTACC GGTCAATTTT  
 - 174 GTTTAAATGC TCTCTGTAA CTAAAAGTCC GTACCAAAC TGTGTAATTT  
 - 124 CATTAAACAT TAATTATTTA GTCCATTCCA TGTCAAATAT GACTTCTATG  
 - 74 CTCTTGTCCT ATAAATTTTA AAGCAATGAG GATTCACCAA GTATACATGC  
 - 24 ATAACAAATT AAGAGCGAG -6  
  
 - 5 CAATAATG

Figure 9

Promoter 16

-1044 GTGAGAAAAT TCATGAGCAC TCTTAGAAAT GTAAATAGTT TGATTTGAAG  
 - 994 AAATGTGGTT TTTAAGAAGA TAATTGCAAA ACTCAGAAAG GATTTACAA  
 - 944 AAAACAATTC GTGAAATCTT TCCTGAATTT CGTAAATCC TTTCTAAATT  
 - 894 TTAGAAAATT ATTATTTGAA TGATTTTACG AAATTTCCGA AAGAATCTAT  
 - 844 AAAATTCAGG AAAGATATCA TAAAATTTAT GAAGAGTTAT ACACAACAAA  
 - 794 AAGAAATTTT TGAATTTTCAT GAAATCCTTC GTAATTGCTT ACATTCCTTC  
 - 744 CTAAATTTTG TAAAATTCTT CCTGGATTTT CTTTTCGAG AAAATAGGGG  
 - 694 CATATATTTT TTACGGGAAA TTTTTTGACG AAAACTTATT TTGGCGGAAA  
 - 644 AAATTGTCAG GAATTTTTTG TAATGAATAT GTGTATTTTT TTAATTGTTA  
 - 594 ATTTTAATAA TAAAATAAAA TAGTTATCTG AATGTTATTT ATGTCAAAAA  
 - 544 AAAATATGAA TGCTATTTTT GTCTTAAAAA CTTAAAATTG TACTATTTGA  
 - 494 AGGAATTTCA TTTTATTTTA TTAATGTGAT TAGATTTATA ATTAAATATA  
 - 444 ATTAAATGAT TGTAATACT AACTTAAATT CTTATTTATA AACATAAAGT  
 - 394 AATATTTAAT TTTCTTTAAT TAAAAATACA TATTTTATTT TCATAATTTA  
 - 344 TTTTGCTTTT TTTTTTTTTT AGTTTGTATT TATTTTAAA CATATAATAT  
 - 294 GAGTATATGA CTATATGACA TAGCATATTG GTTTATTTTG ATTAGATAGA  
 - 244 AAAAGAGACG GGTGAATAAA AGGGTTTAAT ACTATGGTGA ACCCAAGTAT  
 - 194 ATATCGTCCA TAACAAAAAC ACTATATAAT TGAGGTTTGT AGATTGTGCA  
 - 144 AACACGTGTG GGCATATCAG CTTGTAGGAT TGCCACATAC ATTATCATGA  
 - 94 GAAGCTTCCA CCAGAATAAA GCAAAACAAA AAACCTCCGA AGCGGAGAGA  
 - 44 ACAAGGAAAA CTGAAAAACC ATTGTGAAGT ATAGTCCTTG ATGC -1

1 ATGGATT

Figure 10

Promoter 17

-1141 CAAACGAGGC TCCAAATTCA TATTCGGCCT GCATACTTTT GCCCTGGCCC  
 -1091 GGTTTTTTTT TTTCTTTTTT TCGGTGTTTC ATAATACATC AGCTTCCATA  
 -1041 ACTGGAGCAA CCGTTATAGA AAGACATGTA TAAGAACCCC AAAAAACAG  
 - 991 GTACGTCAA AGAGGAAATT CTCATAACAT ACACAATATG CTCCTAATCA  
 - 941 GCCATCGTGT TGTGCTGATC TCCTAGGTGA CATTATGTAT ATCTGTTTGA  
 - 891 TATTTCTTTA ACACAACATG TTATCAGTTA CCCATCAAAA CGTAGTCAGC  
 - 841 TTGAGGTCTT CCAAAAAAAT CCACACTAGA CCTTCCTTCA TCACTTCAAC  
 - 791 AGACTTCAA CTTCTATCCC AAAAGGAAAA AACTAAATAA GTTGAAAGGA  
 - 741 ATGGTCGAAG GCATGGGGAG ACACCTAATA CGGCAGCTAG ACTAATCCGG  
 - 691 TGGATTGATA AGCAAAC TCG AAACACTCTT TCCTCTATCA GATTATTGGG  
 - 641 GGATAGGAGA TATGACAAAA GACTGCAAAT GTGGTTTGCT TCTAGAAGTT  
 - 591 AAGAGCTTCC GGGATTTTGT TTTTATTTT TTCAGTGTTG TAACAAATTT  
 - 541 AAATTCTGTC GCACTTGTCG TAACAACGAT ATTTTTTCTT TGAATATAAT  
 - 491 TTAACATTAA ATTA AAAAGA AAAACTAAAT AAATTATTTT GAAGTTAATA  
 - 441 TATTATGTTA TTATCTTTGG TTTGCAATAA ATAGATCGAG TCAAGGTCGT  
 - 391 TATATGACCA TTGTTTAGTT ACGACGCTAC TTCATACTTG GAATCTAAGG  
 - 341 AGAAAAAATG TAACATAGTT CTCAGTACTT AATCACATAG TTCTCAGTTC  
 - 291 TTAATCACTT TATTGTTAAA ACTTTTCATC GAATAATTAA TGATTTGATC  
 - 241 TCCAATCTCA ATTAATTATA TATTTCTAAA GCCAAAAGAG ATAATGAAAG  
 - 191 GAGAGGTGGT AGAAAGAAAA CGTTAATGTA TCAAACTCTA ATAAAAGAAA  
 - 141 CTGCGTGTAT AGACACGAAG GCTCCGATCT TTTGCATGTC TCGCACGTGT  
 - 91 CGTCCTCTTT CTCCTACTT AACACATATA TGCATGCACC CTTCTTAGAA  
 - 41 AAGTAGCAA ACATTGTGAA TCATCGGAGA GAGTGGGAAA C -1

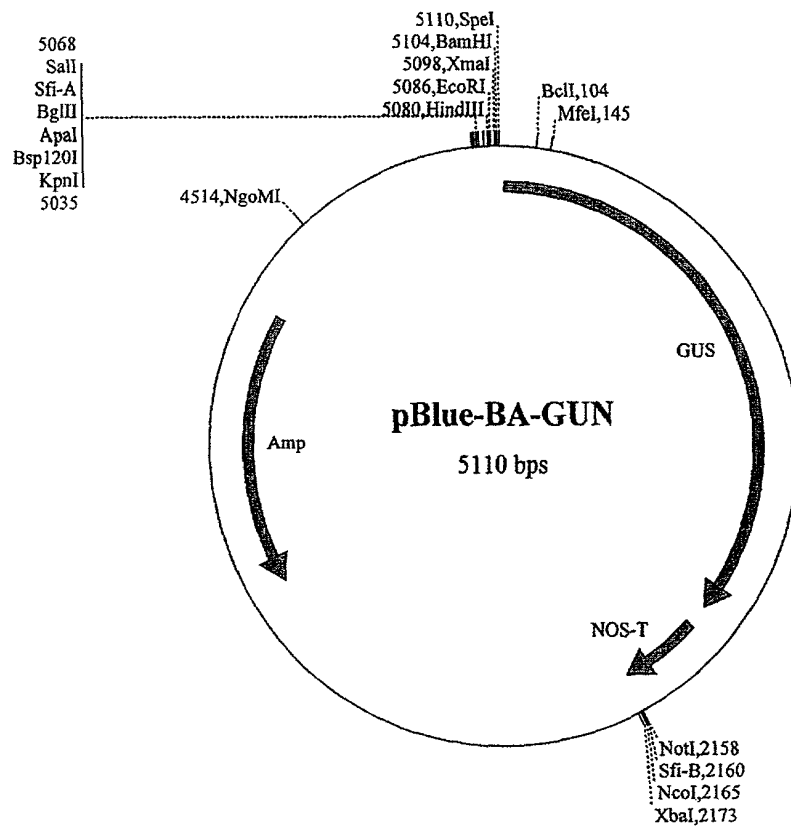
1 ATGGAGA

Figure 11

Promoter 19

-1293 CACCAAGCCT ATACAAACAT AATTTAACGC CGCCTAGTTT TGTTTATTCT  
-1243 GCACGTAACA TATAAAGCTA ACAGATATGC GACAAAATAT CTATAAATTA  
-1193 CATATATAAG TATATATAAT ATAAGAATGT TGGATGTATA TATTAGTAGT  
-1143 TTAATCAATG AAAATATATC TTTATATCTT TATTAAAAAA ACTAAAAATG  
-1093 TATCTTTATA TACATTTTCGT AGTTTAAAAT CAAAATTCAA GATAGAGCGA  
-1043 AAATGATTTT TTTTTTTTTT AATGAACCAA AAGTACAACA TTCCTACCTT  
- 993 TATTTTAAAT AACTCGTTTA TATTCGCCAA TCAGACACAC ACATAGACTT  
- 943 TTAAATAGT AAAAGTAACT TAGCCGATTA TTTATGTAAA ATATTCGTAT  
- 893 AAAATTTTTA TTAACAAATA TATTTGATTT CTCATCTTAT AACCTGTTTA  
- 843 TTGATCAGAT TACACGAAAA AATAACTAAA CAGATAAATT TACTCGAACT  
- 793 GCATACAATA GAGATGTATT TGTGCATGAG TGTAGCCCAA AAATGTGTAA  
- 743 GGAAATAACA CCCATTGGTA GGCCGAGACA TGCCTGTACC ATGGCCGCTG  
- 693 AAATAGTAGA AGAACCAAAT ACCTACCAA GTACTCTTAA GCTAACGTTG  
- 643 ACATGATTTA ATTAGATTAA CGATTGAGTA AACGACAAAT TAGCGCTTTC  
- 593 GTTTTATATT AAAGACGCAC GATATTTAAA TGGCAACTAT ACATTAAAAAT  
- 543 TATATAAAAT ATATAACTAT AACCAATTTG ATAAATGAGA AAAATGTACG  
- 493 ATATGTCGTA CCACTCCATC CTGACTATGA CTTATGGAGG AAGTCAATGC  
- 443 TTATCAACTA CTTGCTTATC AATATCCTAT TTATCACTAT CAGTTTTTCT  
- 393 CTTTTCTATA CATATATTAT TTCCTATAGA TCATGTTGGT CATAATGTAA  
- 343 TCAACTTAAA ATTTAAGATC TACTAGTTTG TGTGAAGTA TAACTGTATA  
- 293 AGCCTAAATT CGAACGTTAG TCTGACTTAA TAGTTAATTC CATTTTGTTT  
- 243 TGGGTAAATG TTTCAGTTTC ACTGCTGTTT GGAAAATCTT TGGACAGATA  
- 193 TTGAGATTGG GCTTATAATA TTTATTATTG GGCCTTAATT TAAGAGCCCT  
- 143 TTTATAGGCA GATACAAAAA CGACGGCGTT TAACTCATCC GCTCAGCGAC  
- 93 TTCCACATAG CCGTTAAAAC GATGATAATA AACCCAATCC GGTTTCATCTC  
- 43 CAACAGAAGA ACGTAATAAC TGATGCTTGT CTTCAAGTCA AC -2  
  
- 1 CATGGAGT

Figure 12



**Figure 13**

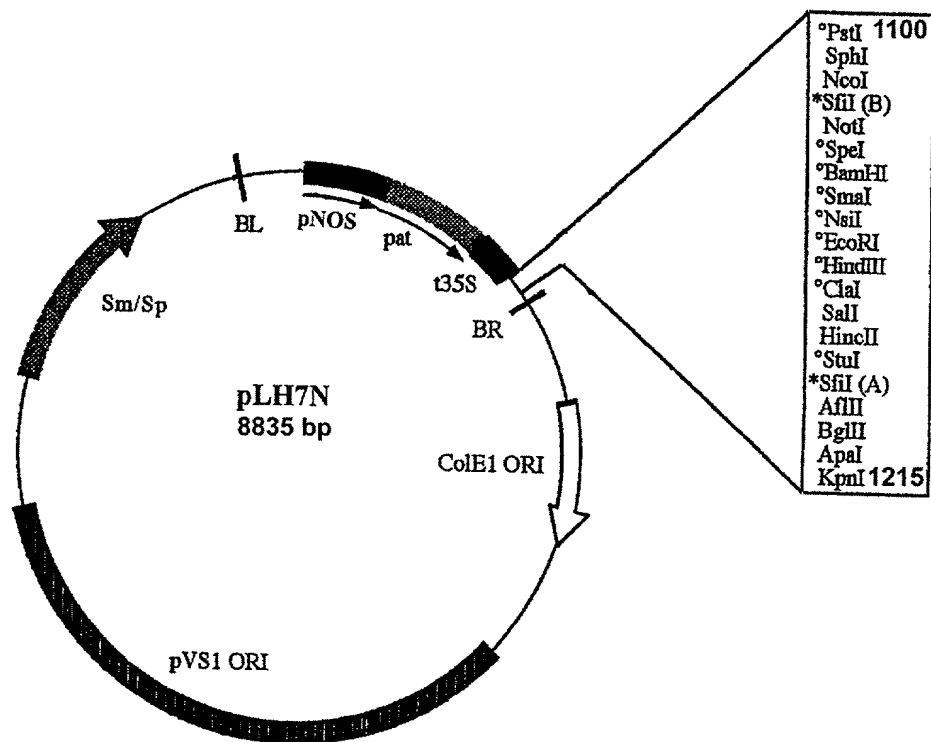


Figure 14

**Promoter 6 :**

**GATCTCTCCCGAAGAAG**

CTAAACGAGTAAAGTTTAGCACGATTGAGACCACACTGACCCATAGCAGTCCAATGAGC  
TACGGAAGGCCTAGGGCTTGAGGCTTGATGAGCGCGTGGTGGGAATAGCGTTTGAATCTA  
AAGTTTCGGTTTGGTACGACTTGTAATATGAAATAATAATGTACAAAGAAGTTCTACGCT  
TAAGGGAACGTGTTTTGTTTTGAGCTTTGTATTAGGACGTCTAGTGTACAACAACGAACG  
TCGTGTATAAGCGATCGTTGACTCTGCACATGTAACCTTTTCCTGAATAAAAAATCTTT  
AAGTCTTTAATTTCTACATCTTTTAGGATTATATAAACGTTACTATATAAATAAAAAAG  
AAAAAAAATCAGTTCATAACATGCGAGACTTTGGGCTAAATATAGTGAATCCAAAGA  
AAATCAGTTATAATATTAATTAATATAAAGCTCATTTCTTTTGGGAATATCGTTATAAGA  
ATATTTTAACCTTGGATATAACTGGGCTTACGCCATTTGCATCTCGAGGATTTTTTGT  
TTGTTTTTGTGTTTTTAAATACATTCTCGCACTTACACACTAAAAATCATAATGATCTTC  
TTAATTCCTTAGCGGAACCACCAATTAATCTTTTTTATTAAGAAGCTTTATTACTTATTT  
ACTTATTTGTGCATACGTGCATTATTTTGGCAGTAACAAATATCGCGTTATATATACTG  
AAATCCGGACGCATTAATAATAGGGATATGATTATATGAACCACTATCTAGCTTTGGTA  
GAAACCAATTATAATCAAATAATTTACCATTATTGAATAAATTAGGCTATATAAGTTC  
ATTAATAGATGCTATAGGTTTTTCTTACAAGGCACACATTTGATTGTTATTTTCTTTCA  
TATACACTGAATGTACATGTGTACACTTGGCATAACATGGCAAGATTATGTGTTACAATA  
TAGACTGTGCCATTGCCATGCAATGTGACTCCTGTGGCCATTTCTATCACAATGTGTCA  
ATCTTGGAGTATCCGTTGTTTATCCTCTAATTTACTGATTAATTTATGAACATGTATAA  
TTATTTATATCATATGATCTCGTAAGATATCTTAGCATTTTCCACCATATGTTATTAGT  
AAATCATCTAGATGGATTGATGTAAATAGGAAAGTTAAATTAACACACCAAAAAAGTAA  
CTGATTAAAAGCATACAACTTAATATTCAGATTATGGTAACTAAATCAGTCTCATGCAA  
ACTCAAAAAATTATACGAGTCACAACCTCTTGATTTTTTTCCGGTTAAACAAAATACAT  
ATTTTCATTTGTATGCAACCAGAATAAAACACTAACTATCTCCTTTAAATACCATTTTC  
CCTACGAGTCTACGACGCTCTCTAAACTTCTTATACAAAACAAAACACACCC

AAATATG

Query: 1 ATTCCAAAGAAAATGAGTTATAATATTAATTAATATAA-AGCTCATTTTCTTTGGAAT 57  
|||||  
Sbjct: 57 ATTCCAAAGAAAATGAGCTTTA-TATTAATTAATATTATAACTCATTTTCTTTGGAAT 1

**Figure 15**

**Promoter 14 :**

CATCTCTGCAAATCAAACCTTATTATTAAGCTACATTTACATAGTGTCTTATAATTCT  
CATGACATAGCAACATTATTTAAACGACAACCTTTCTAGCTTCATTTAAAATGGAAAATCA  
CATAACACTCACATTAACATACTAACATAAACTCACATTACCGACTAGCATATAAAT  
GGATATTGATATAACAATAATCCCCCAAATTTATGTCTATTTTGTTCATTATGCAAATG  
TCCCAAATGATATATCTTGGAAAGTACTAACCGGAGACGAGGGTCGAGGTATAGAAGT  
GATTTGGTCGAACCGAAATGAGGAACCCGGGTTTGGACACCAGGAGCATTTTGGTAATC  
ATCCAAATCAGGGTCATAGTACAACATCATTGATCGCTGAAGCACCTGGTGAAGGGAG  
ACAATAAACTGCTGCATCGAACCATAGCCTAAACCATCCACCACTCTTCTTATGAATC  
GGATATAACCAGCTGCTACACCAGACACTACTTGGCTTGTATTCTCTGTCCAGCCGTAC  
CTCTAGCTGGTTACCTCCGTTTCTTGGAAACCAGAATCAAAGGGTACACGTTGCTACCCA  
CAGCTTGACACATCGAGGTCATCGTCACCACAACGAGTATCGCTATGACTACCGAATAA  
TGTGAAGATATTTTTTTTCATTTTCGTTCTAAGAAACAGACTCTCATGGTCATGGATCTA  
TGCAGAAAGCTGGAGATTTGAAGAAAAAGGTCCATTGAATTTGAAAAACAGAGTAGTAT  
CTTAAACGTAAGGCTTAAGATAAGTAGTATATGGTGGATATGGAACCCGCGTAATCAT  
CTAGAGGCTCTACAAATATTTATTTTGTATTTCCTTCTTATTTTGTATTTGCCTACGTG  
GCATTATACAACGTATTTAACTTGAAACCAGATTTATGGCCC**AATGGCTCGGGTCGACCG**  
**CGACCGATT**TTAAACTGCGCTCCTAACTAAAAAAAGTCAAAACCCTTTGAAAAACCTA  
AAAACGCAATTTGCTTCGTCTCTCATCTCTTTCTCTTTCTCCG

TCGCCACCA**ATG**TTTGAGTACCGGTGCAGCTC

Query: 1 AATGGGTCGGGTCGACCCGACCGATT 26  
||| |||||  
Sbjct: 26 AATCGGTCGGGTCGACCCGACCCATT 1

**Figure 16**



# Promoter 16 :

AGGGACTAGGAACTTAAGAAAAACAAAGTCATCAAAAAACAAAAAAAAGTT

GTGAGAAAATTCATGAGCACTCTTAGAAATGTAAATAGTTTGATTGAAGAAATGTGGT  
TTTTAAGAAGATAATTGCAAACTCAGAAAGGATTTCAAAAAACAATTTCGTCAAATC  
TTTCCTCAATTTTCGTAAAAATCCTTTCTAAATTTTAGAAAAATTATTATTTGAATGATTTT  
ACGAAATTTTCGGAAAGAATCTATAAAATTCAGGAAAGATATCA TAAAATTTATGAAGAG  
TTATACACAACAAAAAGAAATTTTTGAATTTTCATGAAATCCTTCGTAATTGCTTACATT  
CCTTCCTAAATTTTGTAAAATTCCTTCCTGGATTTTCTTTTGCGAGAAAATAGGGGCATA  
TATTTTTTACGGGAAATTTTTTGACGAAAACCTTATTTTGGCGGAAAAAATTGTCAGGAA  
TTTTTGGAATGAATATGTGTATTTTTTTTAATTGTTAATTTTAATAATAAAAATAAATA  
GTTATCTGAATGTTATTTATGTCAAAAAAATATGAATGCTATTTTTGTCTTAAAAAC  
TTAAAATTGTACTATTTGAAGGAATTTCAATTTATTTTATTAATGTGATTAGATTTATA  
ATTAATATAATTAATGATTGTAAATACTAACTTAAATTCTTATTTATAAACATAAAG  
TAATATTTAATTTTCTTTAATTAATAAATACATATTTTATTTTCATAATTTATTTTGCTT  
TTTTTTTTTTTTTAGTTTTGATTTATTTTTTAAACATATAATATGAGTATATGACTATATG  
ACATAGCATATTGGTTTATTTTGATTAGATAGAAAAGAGACGGGTGAATAAAAGGGTT  
TAATACTATGGTGAACCCAAGTATATATCGTCCATAACAAAAACACTATATAATTGAGG  
TTTGTAGATTGTGCAACACGTGTGGGCATATCAGCTTGTAGGATTGCCACATACATTA  
TCATGAGAAGCTTCCACCAGAATAAAGCAAAAACAAAAAATCCGAAAGCGGAGAGAACA  
AGGAAAACCTGAAAAACCATTGTGAAGTATAGTCCTTGATGC

ATGGATTCAATCAACAAGATCATCAACTTCTTGTTTCCTCTCT

Query: 1 TGAAATCTTCCTGAATTTTCGTAAAATCCTTTCTAAATTTTAGAAAATTATTATTTGAAT 60  
||| ||||| ||||| || || || || ||||| ||||| ||| |||  
Sbjct: 109 TGATATCTTCCTGAATTTTATAGATTCCTTCCGAAATTTTCGTAAAATCATTCAAATAAT 50

Query: 61 GATTTTACGAAATTTTCGAAAGAATCTATAAAATTCAGGAAAGATATCA 109  
|||| ||||| || || || || ||||| ||||| |||  
Sbjct: 49 AATTTTCTAAATTTAGAAAGGATTTTACGAAATTCAGGAAAGATTTCA 1

Figure 17

**Table 2. Selected Seed-Specific Genes**

The selected ESTs and their predicted protein sequences were blasted against protein and DNA sequence databases of NCBI, to identify a possible function of each gene and its corresponding Arabidopsis genome sequence.

ID	Description based on BLAST search of EST	Expres- sion Ratio	Clone ID	Accession Number of Genomic Clone	BLAST Alignment of EST to Genomic Sequence	
1	12S Cruciferin	49.9	<u>M30C01</u>	AL021749	13---283 65745---66103	
2	12S seed storage protein	78.8	<u>M29F06</u>	AB005239	191---399 15999---15804	
3	2S SEED STORAGE PROTEIN 3 PRECURSOR	41.5	<u>M09C04</u>	AL035680	8---369 32165---32525	
4	vicilin precursor	19.1	<u>M60B08</u>	AB022223	17---400 2559---2943	
5	similarity to vicilin (7S globulin)	17.3	<u>M51A09</u>	Z99708	15---328 69093---69460	327---399 69490---69563
6	12S seed storage protein	23.4	<u>M19H03</u>	AC003027	34---220 67515---67329	218---400 67229---67048
7	2S SEED STORAGE PROTEIN 1 PRECURSOR	60.0	<u>M52E11</u>	AL035680	22---380 27709---28066	
8	Unknown gene Laccase-like (diphenol oxidase)	11.6	<u>M18A04</u>	AB017064	24---150 66806---66680	148---371 66193---65973
9	Unknown protein Arabidopsis	37.2	<u>M42C12</u>	AC000375	16---399 8408---8025	
10	unknown protein	29.7	<u>M20H04</u>	AC004392	25---390 90414---90780	
11	Putative pyruvate kinase	69.2	<u>M36D01</u>	AB009055	32---374 68629---68966	
12	pyruvate dehydrogenase E1 alpha subunit	27.5	<u>M15B07</u>	AC007323	3---373 48490---48120	
13	Similar to nucleoid DNA- binding protein, aspartic proteinase, and pepsinogen A precursor	7.0	<u>M42A08</u>	AB026658	28---393 68590---68226	
14	A large hypothetical protein	8.6	<u>M40D09</u>	AC004557	18---393 82725---82350	
15	germin-like protein (oxalate oxidase), similar to auxin- binding protein, plant only	42.1	<u>M31F10</u>	AB010694	13---400 18058---17673	
16	Similar to 11beta- hydroxysteroid dehydrogenase, oxidoreductase	39.3	<u>M13A03</u>	AB023037	9---201 52852---52660 395---426 52096---52065	199---388 52589---52400

**Figure 18a**

ID	Description based on BLAST search of EST	Expression Ratio	Clone ID	Accession Number of Genomic Clone	BLAST Alignment of EST to Genomic Sequence
17	putative seed storage protein (vicilin-like)	19.0	<u>M32C09</u>	AC006587	23---161      158---341 14510---14372      14289---14106 342---400 14033---13975
18	Lipoxygenase-like protein	16.8	<u>M30E03</u>	AB022215	21---99      96---308 47943---48021      48768---48978
19	Unknown gene, some similarity to selenium-binding protein-like gene	31.8	<u>M55E09</u>	AC002387	26---90      89---244 73712---73648      72555---73400 245---400 73308---73153
20	Cytochrome P450-like protein	25.4	<u>M32E09</u>	AB007648	21---394 16931---16559

**Figure 18b**

Table 3. Primers for the PCR amplification of 12 promoter regions

name	sequence	position	REs	T(°C)	Length 1	Length2
1R	CACT GGATCC TTTTGTGTTTGTGTGAGAGATG	best+3	Bam	48	23	32
1F	CACT GAATTC ACAACACATACACTCAAAATC	best	Eco	48	21	30
3R	CACT GGATCC GTTTTGCTATTGTGTATGTTTC	best+0	Bam	48	24	34
3F	CACT GAATTC AAGAGGTAAACGTAC	best	Eco	48	18	27
4R2	CACT GGATC C TTGTTGTTTGTGTGATGTGT	best+5	Bam	48	22	31
4F2	CACT GAATT C CATTTGTTTACACGTC	best	Eco	48	16	25
6R	CACT GGATCC GGGTGTGTTTGTGTTTGTATAAG	best+4	Bam	52	23	33
6F	CACT GAATT C TAAACGAGTAAAGTTAGCAC	best	Eco	52	22	31
7R	CACT GGATC C TATGTGTGTAIGTTTGGTTC	best+6	Bam	52	22	31

Figure 19a

name	sequence	position	REs	T(°C)	Length 1	Length2
7F	CACT GAATTC GATCCGAAAAGTAGAGTTTC	best	Eco	52	20	30
9R2	CACT GGATC C TTTTGATTTTTTGGATTAGATTGTGTTGTGGT	nb+0	Bam	52	34	43
9F	CACT GAAT TC AGAAAGAGAAAGTGAGC	best	Eco	52	18	26
13R	CACT GGA TCC GGCGAAGGTTGATATGA	best+4	Bam	60	20	27
13F	CACT CAAT TG ACACGCAACCAACCAAGC	best	Mfe	60	20	28
14R	CACT GGATC C GGAGAAAAGAGAAAGAGAT	best+8	Bam	52	19	28
14F	CACT GAATT C ATCTCTGCAAAATCAAACC	best	Eco	52	19	28
15R	CACT GGATC C TCGCTCTTAATTGTTATGC	best+5	Bam	52	21	30
15F	CACT CAATT G TAAGTCGTTCTCTAATCTTC	best	Mfe	52	21	30
16R	CACT GGATCC GCATCAAGGACTATACTTCAC	best+0	Bam	56	21	31

Figure 19b

name	sequence	position	REs	T(°C)	Length 1	Length2
16F	CACT GAATTC GTGAGAAAATTCATGAGCACTC	best	Eco	56	22	32
17R	CACT GGATCC GTTTCCTCCACTCTCTCC	best+0	Bam	56	16	26
17F	CACT GAAATT C AAACGAGGCTCCAAATTC	best	Eco	56	19	28
19R	CACT GGATCC GTTGACTTGAAGACAAGC	best+1	Bam	52	18	28
19F	CACT GAAATT C ACCAAGCCTATACAAAC	best	Eco	52	18	27

Position: Distance from the best position ( for reverse primers, it is ATG )

REs : Restriction enzyme sites included

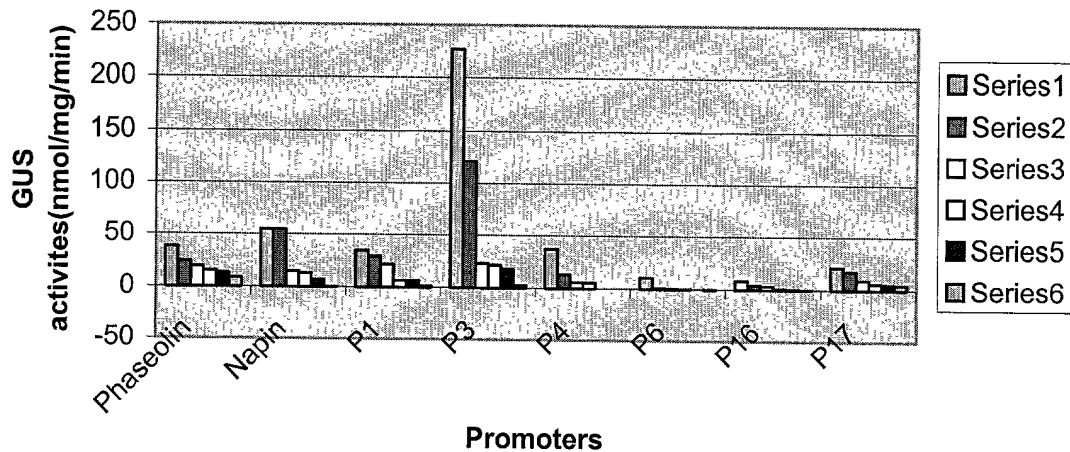
T(°C): Annealing temperature

Length 1: Length of the sequences exist in genomic sequences

Length 2: Full length

Figure 19c

Figure 20



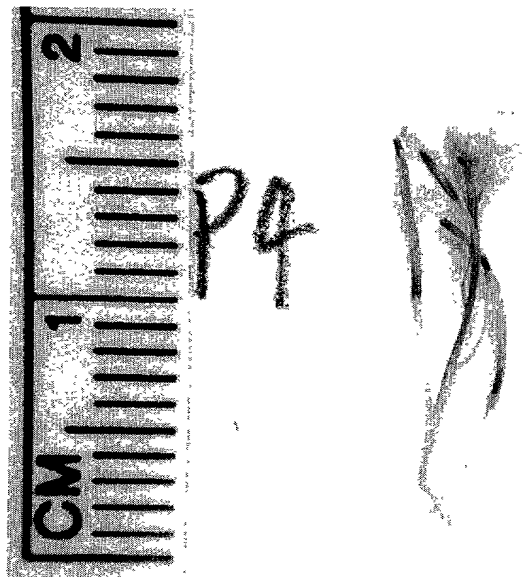


Figure 21



# Figure 22

